

HFUS 3 BOU 212200

FROM SPACE ENVIRONMENT SERVICES CENTER, BOULDER, COLORADO

SDF NUMBER 112

JOINT USAF/NOAA REPORT OF SOLAR AND GEOPHYSICAL ACTIVITY.

ISSUED 2200Z 21 APR 1984

IA. ANALYSIS OF SOLAR ACTIVE REGIONS AND ACTIVITY FROM 20/2100Z TO 21/2100Z: SOLAR ACTIVITY HAS BEEN AT MODERATE TO HIGH LEVELS DURING THE PAST 24 HOURS. THE SOUTHEAST LIMB WHERE REGION 4474 (S10E74) IS ROTATING ONTO THE VISIBLE DISK HAS BEEN EXTREMELY ACTIVE. FREQUENT FLARES, SURGES AND ERUPTIVES HAVE BEEN REPORTED IN THAT AREA. THE MOST DRAMATIC EVENT WAS AN M1/2B FLARE AT 211458Z (MAX) THAT WAS ACCOMPANIED BY A FILAMENT DISAPPEARANCE AND THE ERUPTION OF A LIMB PROMINENCE. THE MOST ENERGETIC EVENT FROM THAT AREA WAS AN X1 EVENT AT 212017Z (MAX) WITH NO REPRESENTATIVE OPTICAL CORRELATION AS ONLY A SUBFLARE WAS REPORTED. REGION 4474 HAS ONLY REVEALED A C TYPE SPOT GROUP THUS FAR AND IT IS BELIEVED THAT ADDITIONAL SPOTS REMAIN BEHIND THE LIMB. REGION 4471 (N04W87) HAS ALSO PRODUCED ENERGETIC FLARES TODAY BEGINNING WITH AN M1/1B AT 210255Z (MAX). NONE OF TODAY'S FLARES HAVE PRODUCED RADIO BURSTS OF ANY SIGNIFICANCE. THE OTHER DISK FEATURES ARE RELATIVELY QUIET.

IB. SOLAR ACTIVITY FORECAST: SOLAR ACTIVITY IS EXPECTED TO BE MODERATE TO HIGH FOR THE NEXT FEW DAYS BASED ON THE EAST LIMB ACTIVITY.

IIA. GEOPHYSICAL ACTIVITY SUMMARY FROM 20/2100Z TO 21/2100Z: THE GEOMAGNETIC FIELD HAS BEEN AT ACTIVE LEVELS DURING THE PAST 24 HOURS.

IIB. GEOPHYSICAL ACTIVITY FORECAST: THE GEOMAGNETIC FIELD IS EXPECTED TO REMAIN AT ACTIVE LEVELS AS IT CONTINUES TO RESPOND TO RECURRENT EFFECTS.

III. EVENT PROBABILITIES 22 APR-24 APR

CLASS M 90/90/90

CLASS X 25/25/25

PROTON 10/10/10

PCAF YELLOW

IV. OTTAWA 10.7 CM FLUX

OBSERVED 21 APR 126

PREDICTED 22 APR-24 APR 127/128/131

90 DAY MEAN 21 APR 131

V. GEOMAGNETIC A INDICES

OBSERVED AFR/AP 20 APR 019/021

ESTIMATED AFR/AP 21 APR 017/020

PREDICTED AFR/AP 22 APR-24 APR 015/020-020/025-025/040

SOLTERWARN